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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 09/887,759 | 06/21/2001 | Gerald George Kiernan | ARC920010054 | 7480 |

22462 7590 08/12/2005

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| EXAMINER |
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VEILLARD, JACQUES

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| ART UNIT | PAPER NUMBER |
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2165

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/887,759

Applicant(s)

KIERNAN ET AL.

Examiner

Jacques Veillard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to the Applicant's communication filed on 11/10/2004.
2. Claims 3, 11, and 19 have been amended
3. Claims 1-24 are presented for examination.

Claim Objections

4. Claims 1, 9, and 17 are objected to because of the following informalities: Claims 1, 9, and 17 preamble according to current US practice. The Examiner suggests replacing - performing- before a query by "simplifying" at line 1 of claims 1, 9 and 17. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 17-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 17, the Specification page 5, lines 1-10 contains language that makes the claim non statutory. "The term "article of manufacture" as used herein, refers to any medium, signal or carrier that provides information or is usable by a processor(s). Such a medium, signal or carrier may take many forms, including, but not limited to, non-volatile, volatile, and transmission media....Transmission media includes coaxial cables, copper wires and fiber optics, including the wires that comprise the bus. Transmission media can also take the form of carrier

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waves, i.e., electromagnetic waves that can be modulated, as in frequency, amplitude, or phase, to transmit information signals. Additionally, transmission media can take the form of acoustic or light waves, such as those generated during radio wave and infrared data communications."

The Supreme Court states in *Diamond v. Chakrabarty*, 206 USPQ 193, 196, 197 (US SupCt, 1980) "Guided by these canons of construction, this Court has read the term "manufacture" in §101 in accordance with its dictionary definition to mean "the production of articles for use from *raw materials* prepared by giving to these materials new forms, qualities, properties, or combinations whether by hand labor or by machinery." *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931) (*italics added*). Since a "manufacture" as described in the specification at page 5 lines 1-10 does not fit in the definition above, the claim cannot be placed into one of the four statutory categories of an invention. The claimed subject matter referring to without a tangible embodiment (computer or computer readable medium) is considered as program software per, therefore non-statutory.

Regarding claims 18-24, they are also rejected under the same basis in virtue to their dependency of the base claim.

According to the Spec. pg. 5, lines 1-10, the article of manufacture of claim 17 could be a "signal." Changing to medium or device could fix the problem.

Allowable Subject Matter

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6. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).


7. The following is an examiner's statement of reasons for allowance: Applicant's particular database management system in a computer environment for the optimization of queries that includes self join comprising of two-layered middleware approach to simplify a query in a distributed database management system, such as, determining whether a query includes a self join that is transitively derived through table expression having union operators; and simplifying the query to eliminate the table expressions by reducing the query to an equivalent one over tables, when the query includes the self join that is transitively derived through table expression having union operators, wherein the determining and the simplifying step are implemented as a rule-base transaction in which the determining step comprises a condition part of the rule, and the simplifying step comprises an action part of the rule that is performed when the condition part is true as embodied in the independent claims 1, 9, and 17, in context with the other limitations of the claims and as further described in the Specification on pages 1, 2, 7-10 was not described by, would not have been obvious over, nor would have been fairly suggested by the prior art of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques Veillard whose telephone number is (571) 272-4086. The examiner can normally be reached on Mon. to Fri. from 9 AM to 4:30 PM, alt. Fri. off..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272- 4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

J.V
Jacques Veillard
Patent Examiner TC 2100

August 8, 2005